Indiana Traffic Safety Facts 2001

Children

http://www.in.gov/cji

In the year 2001, the 1.4 million Indiana children under the age of 16 made up 23.0 percent of the state's population (6.1 million). Nationally, there were 64.9 million children under 16 in the United States, of which 2.3 percent resided in Indiana.[1]

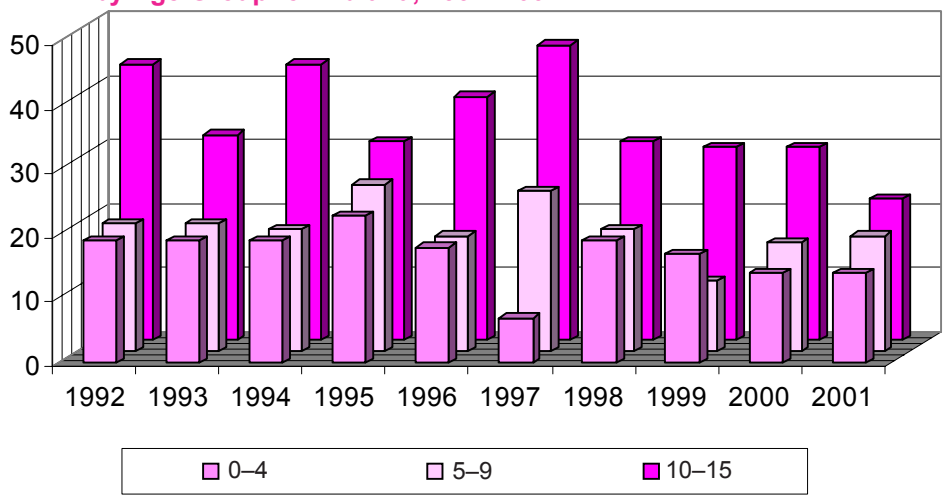
In 2001, there were 909 traffic-related fatalities in Indiana, and the under 16-year-old age group accounted for 5.9 percent (54) of those fatalities, just slightly below the national figure of 6.1 percent. Children under the age of 16 accounted for 4.7 percent (39) of all vehicle occupant fatalities in Indiana (838), compared to 5.3 percent in the U.S. One child died in an Indiana crash every six days in 2001.

The number of traffic fatalities among children 10–15 years of age has decreased considerably.

Males accounted for 68.5 percent (37 of 54) of these (children under the age of 16) fatalities in Indiana. In contrast, males in this age group accounted for 57.9 percent of the fatalities in the U.S. Fifteen-year-old Indiana occupants (eight passengers and two drivers) had the highest incidence rate of child fatalities, constituting 18.5 percent of all traffic fatalities below the age of 16.

As seen in Figure 1, the total number of traffic fatalities among children 10–15 years of age has decreased considerably (from 46 to 22) since 1997 and also displayed a gradual reduction over the past ten years. However, among children 0–4 and 5–9 years of age, the annual number of Indiana traffic fatalities has remained relatively flat over the past decade.

Figure 1: Total Traffic Fatalities Among Children 0–15 Years Old by Age Group for Indiana, 1992–2001



Blood alcohol content in drivers is negatively correlated with restraint use for children.

Child Endangerment

The National Center for Health Statistics reports that injuries resulting from motor vehicle crashes are the leading cause of death for children 1–14 years old in the U.S.[2] A study published in the Journal of the American Medical Association in 2000, indicated that nearly 24 percent of children 0–14 years old who died in motor vehicle crashes in the U.S. between 1985–1996 were killed in alcohol-related crashes. Of these deaths, 64.0 percent of the children were riding in a vehicle whose driver had been drinking at the time of the crash. Additionally, blood alcohol content in drivers is negatively correlated with restraint use for the children.[3] (As the drivers' level of intoxication increased, the level of restraint use for their child passengers decreased).

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[1] Indiana's census by age for 2001 was derived using population growth estimates based on data available at http://factfinder.census.gov/servlet/DTTable?ds_name=DEC_2000_SF1_U&geo_id=04000US18&mt_name=DEC_2000_SF1_U_PCT012 and http://quickfacts.census.gov/qfd/states/18000.html.

[2] National Center for Health Statistics (NCHS) Vital Statistics System. "National Mortality Data, 1998." Hyattsville (MD): NCHS 2000.

[3] Quinlan KP, Brewer RD, Sleet DA, Dellinger AM. "Characteristics of child passenger deaths and injuries involving drinking drivers." *JAMA* 2000; 283(17): 2249–52.

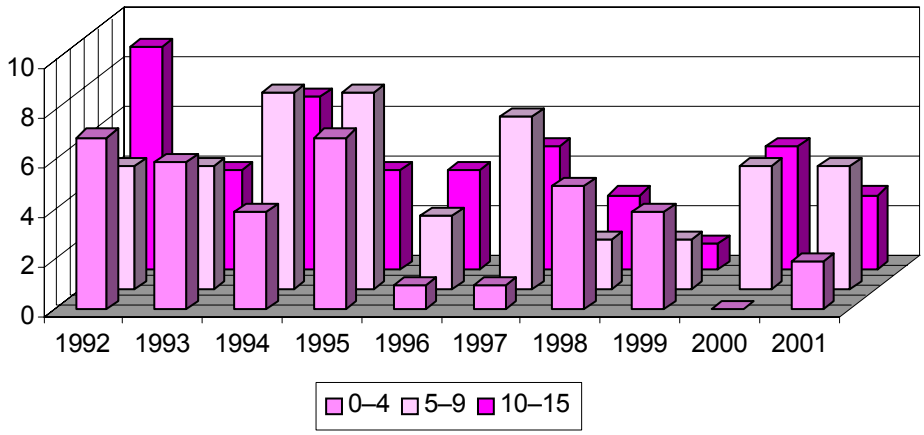
In 2001 in Indiana, there were seven children killed in alcohol-related crashes,[4] representing 13.0 percent of all child fatalities for the year. Four of the killed children were passengers in a vehicle driven by a driver who was impaired at the time of the crash.

Pedestrians (Children)

Indiana had a 52.4 percent decrease in pedestrian fatalities among the 0–15 year old age group.

Nationally, there was a 43.5 percent decrease in pedestrian fatalities among the 0–15-year-old age group from 1992–2001. Indiana had a 52.4 percent decrease, as it went from 21 child pedestrian fatalities in 1992, to ten child pedestrian fatalities in 2001. While the number of actual fatalities (by age group) vary widely from year to year, the trend has been favorable over the last ten years. None of the fatal crashes in 2001 (involving a child pedestrian fatality) occurred at an intersection. Seven of the fatalities occurred in an incorporated municipality, while three occurred in rural areas.

Figure 2: Total Pedestrian Fatalities Among Children 0–15 Years Old by Age Group for Indiana, 1992–2001



Of the 56 pedestrian fatalities in Indiana for 2001, the 0–15 age group represented 17.9 percent (ten) of those fatalities. Also in 2001, all ten Indiana child pedestrian fatalities were males, compared to 2000, when five male and five female child pedestrian fatalities were recorded. The average ratio for child pedestrian fatalities in the 1992–2001 time period was approximately two males for every female killed.

Pedalcyclists

In 2001, children below the age of 16 represented 41.7 percent (five of the 12) of the pedalcyclists killed in Indiana motor vehicle crashes (none were below age five). There were only three pedalcycle fatalities below five years of age in the nation. Nationally in 2001, children comprised 21.4 percent of the total pedalcyclist fatalities in motor vehicle crashes.

In the five Indiana child motor vehicle-related pedalcycle fatalities, only one was wearing a helmet.

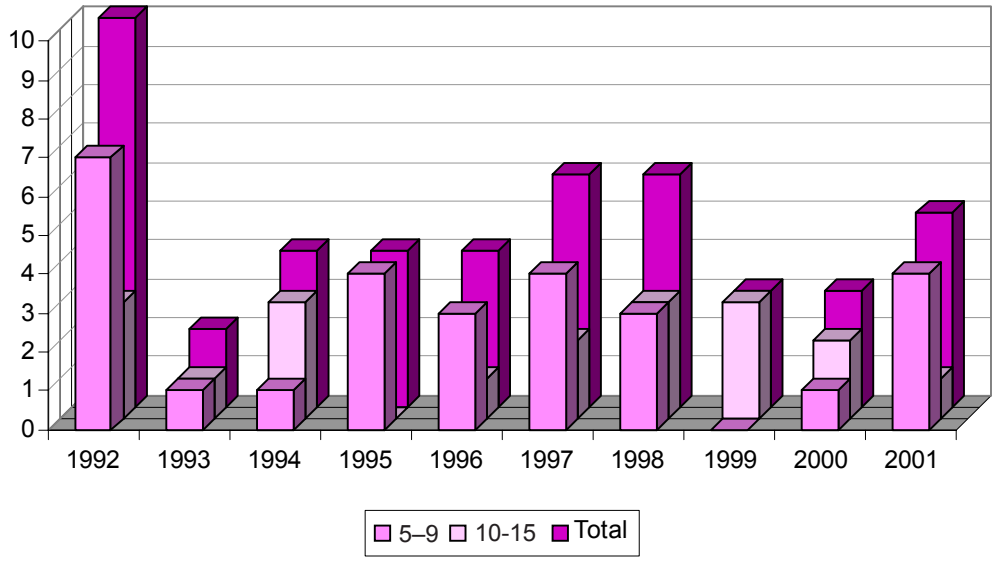
While the Indiana figure of 41.7 percent is substantially higher than the national figure, it does represent a decreasing trend from 1992, when children accounted for ten of the pedalcyclist fatalities in motor vehicle crashes (see Figure 3).

According to the Center for Disease Control (CDC), pedalcycle riders should wear a helmet every time they ride. However, despite the fact that helmets are 85 percent effective in reducing serious head injuries, only about 25 percent of children ages 5–14 wear them.[5] In the five Indiana child motor vehicle-related pedalcycle fatalities in 2001, only one was wearing a helmet.

[4] An alcohol-related crash is defined as a vehicle crash involving at least one driver or non-occupant with a blood alcohol concentration (BAC) level of .01 gram per deciliter (g/dl) or higher.

[5] National Center for Disease Control "Preventing Bicycle-related Head Injuries." Available on the Internet at http://www.cdc.gov/ncipc/factsheets/bikehel.htm.

Figure 3: Total Pedalcyclist Fatalities Among Children 0–15 Years Old by Age Group for Indiana, 1992–2001



None of the four fatally injured children who were occupants in a pickup truck were restrained.

Restraints

The National Highway Traffic Safety Administration (NHTSA) cites research stating that lap/shoulder belts, when used on front seat occupants (age five and older), reduce the risk of fatal injury by 45 percent in passenger cars, and 60 percent for light trucks.[6]

Table 1: Restraint Use by Passenger Vehicle Occupant Fatalities in Crashes by Age for Indiana, 2001

	Age Group (Years)					
Restraint Use	**0–4**	**5–9**	**10–15**	**16–20**	**21+**	**Total**
Proper	10	3	4	40	204	261
Not Proper	0	5	9	75	293	382
Unknown	1	0	1	21	70	93

During 2001 in Indiana, there were 142 passengers under the age of 16 in fatal passenger vehicle crashes. Where the restraint is known for these crashes, 40.8 percent (53 of 130) were not properly restrained. Of the 31 (of 33) passenger fatalities younger than 16 years old in passenger vehicles whose restraint was known, 45.2 percent (14) of them were not properly restrained, compared to an estimated 49 percent totally unrestrained in the nation. None of the four fatally injured children who were occupants in a pickup truck were restrained. Excluding those children that were in a car seat, and where restraint usage was known, only three of the 12 fatally injured children (0-15 years of age) were properly restrained. Two of the fatally injured children, riding in the front seat of passenger cars, were wearing only a lap belt.

Table 2: Children Under Five Years Old Fatally Injured in Passenger Vehicle Crashes by Age Group and Type of Restraint for Indiana, 2001

Type of Restraint	Infants (Under Age 1)	Toddlers (Age 1–4)	Total
None Used	0	0	0
Child Seat	3	4	7
Adult Seat Belt	0	3	3
Unknown	0	1	1

NHTSA reports that child safety seats are found to reduce fatal injury by 71 percent for children under one year old, and 54 percent for children 1–4 years old in passenger cars. The corresponding figures for light trucks are 58 percent and 59 percent, respectively. In Indiana in 2001, there were 11 passenger vehicle occupant fatalities under the age of five (see Table 2).

[6] Restraint safety information taken from the National Highway Traffic Safety Administration's "Traffic Safety Facts 2000, Children." This document is available online at http://www.nhtsa.dot.gov.

81.6 percent of the child restraints inspected were improperly used.

Of these, the 10 fatalities whose restraint status is known, one of them was not properly restrained, a two-year-old using an adult lap and shoulder belt. One child under the age of five was also fatally injured as a passenger of a truck-tractor using a car seat improperly.

NHTSA reports that between 1975 and 2000, 4,816 lives were saved by the use of child restraints. However, based on a recent nationwide campaign to increase child passenger safety (SAFE KIDS BUCKLE UP), 81.6 percent of the child restraints inspected were improperly used, with an average of 3.0 errors per restraint. Rear-facing child safety seats, used for newborns and infants, had 86.3 percent overall incorrect use, while forward-facing child safety seats were at 88.0 percent incorrect use.

The most frequent problems in these seats were listed as follows: failure of the safety belt to tightly lock the seat in the vehicle, failure of the harness straps to snugly restrain the child, improper positioning of the harness retainer clip for the rear-facing seats and incorrect use of a top tether strap for forward facing seats. The next most common incorrectly used restraint was vehicle safety belts, at 85.1 percent. Typically, the shoulder belt was not centered over the shoulder.[7] One of the six fatally injured children (restrained with a car seat) was in the front seat of a passenger car in 2001.

Conclusion

The death of a child as a result of a traffic crash is a terrible loss of life, a traumatic event, and an unnecessary event when that death is caused by an irresponsible driver. Indiana has made the greatest progress in reducing child fatalities in the 10-15 year-old age category over the last 10 years. However, minimal progress has been made in reducing the number of child fatalities in the 0–4- and 5–9-year-old age groups. Overall, both Indiana and national figures for child pedestrian fatalities are decreasing at similar rates.

The rate of child passenger fatalities in vehicles driven by drivers who had consumed alcohol is greater in Indiana than the rest of the nation.

Indiana has a slightly higher percentage of child traffic fatalities involving alcohol (12.9 percent) than the national average for 2001 (10.3 percent). Additionally, the rate of child passenger fatalities in vehicles driven by drivers who had consumed alcohol is greater in Indiana than the rest of the nation. Drunk drivers contributed to the death of at least seven children in Indiana, four of which were occupants in the drinking driver's vehicle.

While the state of Indiana is proactive in encouraging drivers to buckle their child passengers, the maximum penalty remains at $25 for a child restraint violation, and/or the possibility of having four points added to the violator's driver's license. Indiana continues to see fatalities due to the lack of use and the lack of proper use of seatbelts and child seats. The pickup truck seatbelt exemption currently in place in Indiana can be considered the contributing factor for to up to four of the child fatalities that occurred in 2001, as all four were not properly restrained at the time of their death. Indiana residents need to be further educated on the proper use of seatbelts and safety restraints for children.

While drunk driving remains a crucial threat to Indiana children's safety, increased law enforcement and driver education concerning proper restraint may be the most effective way to improve child passenger safety.[8]

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[7] This information was compiled using car seat check up data from Feb. 2001–May 2002. The results are available online at http://www.safekids.org/content_documents/Highlights.PDF. Car safety tips are available at http://www.safekids.org/tier3_cd.cfm?content_item_id=7210&folder_id=300.

[8] Child safety laws and regulations for each state are also available at http://www.safekids.org.

This publication was prepared on behalf of the Indiana Criminal Justice Institute by Purdue University's Center for the Advancement of Transportation Safety. All information contained within was gathered from the Fatality Analysis Reporting System (FARS) Web-Based Encyclopedia provided by the National Highway Traffic Safety Administration (NHTSA) available at http://www.fars.nhtsa.dot.gov. All figures are considered current as of September of 2002. Please direct any questions concerning data in this document to the Center for the Advancement of Trans-portation Safety, Purdue University, Potter Engineering Center, Room 322, 500 Central Drive, West Lafayette, IN, 47907-2022.